Abstract

Title: Adaptation of organism on training load in artistic gymnastics

Objectives: The goal of this crosscutting study is to discover how the artistic gymnasts in prechool age and school age differ from other children in the same age category.

Methods: The method of this study consisted of analysis of body composition of 82 boys in age 7,51 ±1,9. Kruskal Wallis test was used to test the hypothesis of conformity in the results of individual variables across test groups to compare differences among all groups. A Mann-Whitney U test with Bonferroni correction was used in post-hoc analysis.

Results: Statistically significant differences between gymnasts and other participants were found in the percentage body fat. The school age with values ($p < 0,001$), ($r = 0,542$) and the preschool age ($p = 0,015$), ($r = 0,530$). There were not statistically significant differences in the other measures.

Conclusion: Surprisingly, gymnasts in both age groups did not differ very much in most categories. Statistically significant difference was between gymnasts and other in percentage body fat, where gymnasts had these values much lower across all categories.

Keywords: adaptation, training, artistic gymnastics, preschool age, school age